

REMARKS

Reconsideration of this patent application is respectfully requested in view of the following remarks. Claims 14-28 are in the application. This response does not include any accompanying amendment of the claims.

The Examiner rejected claims 14-28 under 35 USC 102(b) as being anticipated by, *Boger et al.*, *Dunlop* or *Gregg*. Applicant respectfully traverses.

Accordingly, Applicant submits that claims 14-28 are patentable over the prior art, taken either singly or in combination.

In particular, the applicant believes that there are significant differences between the present invention as claimed in claim 14 and the above cited references.

First, none of the above references show a contoured pneumatic spring bellows that has a dynamic zone that is not in contact with an outer guide as claimed in claim 14. Second, none of the references disclose a pneumatic suspension bellows such that it is expandable so that an outside surface of the pneumatic suspension bellows contacts the outer guide.

Best Available Copy

With the first difference, none of the prior art shows a pneumatic suspension bellows having a contoured region as claimed in claim 14, with a first dynamic region and a static region. In all of the designs above, the pneumatic suspension bellows is essentially flat against the wall of the outer guide.

The second difference extends from the design difference described above. Because the pneumatic spring bellows is formed in a contoured manner, it normally free of the outer guide so that it is expandable into the outer guide.

The second difference is outlined with the passage of claim 14 and is shown below:

an outer guide disposed around said pneumatic suspension bellows wherein said outer guide contacts a surface of said contoured pneumatic suspension bellows to mark a division between said dynamic zone and said static zone, wherein when pressure is applied to said contoured pneumatic suspension bellows, said dynamic zone of said contoured pneumatic suspension bellows bends out to contact said outer guide and to form a roll off fold to change the diameter of said contoured pneumatic suspension bellows as it is being loaded and relieved, with said change occurring with respect to said outside diameter of said roll off piston zone.

In contrast to the passage above, which is part of claim 14, the cited references disclose devices that are of an entirely different construction as well as an entirely different in function.

For example, with the designs of all of the above references,

the pneumatic suspension bellows is in contact with the outer guide

such that the contact surface is a majority portion of the outer

surface of the bellows 17 in FIGS. 1 and 2 of *Boger*, of bellows 8

of FIGS. 1, 2, and 3 of *Dunlop*, and bellows 18 of FIGS. 1 and 2

of *Gregg*. Thus, when any of the designs of the above inventions

are loaded, the suspension bellows rolls off of and away from the

outer guide. With the contact surface of these bellows comprising

a majority portion, it leads to a design that is much less flexible

than the design of the present invention. For example, the design

of the present invention as in claim 14 includes a suspension

bellows that actually comprises two different zones, with a dynamic

zone formed on one side of the contact region and a static zone

formed on an opposite side of the contact region. This division

between the two zones is possible because of the limited contact

surface between the pneumatic suspension bellows and the outer

guide which then allows the pneumatic suspension bellows to expand

into the outer guide and provide additional suspension or

resiliency against a load.

It is also important that the bellows can be formed in a contoured manner because if the pneumatic suspension bellows was in flat contact with the outer guide, it would conform to the surface of the outer guide. If the pneumatic suspension bellows was flat, there would not be a division between a static zone and a dynamic

region. The contour of the pneumatic suspension bellows creates this important dynamic zone such that when the pneumatic suspension piston encounters pressure, that pressure can be compensated for by an expansion of the pneumatic suspension bellows in the dynamic zone to form a "variable volume air chamber" as stated in claim 14.

Thus, the applicant believes that claim 14 and dependent claims 15-

28 are allowable over the references cited taken either singly or in combination.

Early allowance of the remaining claims is respectfully requested.

Respectfully submitted,

ANTONIO BRANCO ET AL - 1



William C. Collard, Reg. No. 38,411

Allison C. Collard, Reg. No. 22,532

Edward R. Freedman, Reg. No. 26,048

1077 Northern Boulevard COLLARD & ROE, P.C.  
Roslyn, New York 11576 Attorneys for Applicants  
(516) 365-9802

WCC:ea

Enclosure: Three-Month Extension of Time.

I hereby certify that this correspondence is being Faxed to Examiner Butler at (703) 872-9306 on February 17, 2005.

  
William Collard

R:\Patents\B\BRANCO ET AL - 1(PCT)\BRANCO ET AL - 1 3rd AMEND.wpd

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☒ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**